Case 3217

Scleritoderma Schmidt, 1879 and *Setidium* Schmidt, 1879 (Porifera): proposed conservation by the designation of *Scleritoderma flabelliformis* Sollas, 1888 as the type species of *Scleritoderma*

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Abstract. The purpose of this application is to conserve the accustomed understanding and usage of the names for two genera of sponges, *Scleritoderma* and *Setidium*, both of Schmidt (1879) (family SCLERITODERMIDAE), by the designation of *Scleritoderma flabelliformis* Sollas, 1888 as the type species of *Scleritoderma*. At present the type species by monotypy of these genera, *Scleritoderma paccardi* Schmidt, 1879 and *Setidium obtectum* Schmidt, 1879 respectively, are conspecific. The name *Scleritoderma* relates to a group of five species from the tropics world wide at 15° north and south; the name *Setidium* relates to a single species from the Caribbean. The specific name *obtectum* is given precedence over *paccardi*.

Keywords. Nomenclature; taxonomy; Porifera; Demospongiae; 'lithistids'; SCLERITODERMIDAE; *Scleritoderma*; *Setidium*; *Scleritoderma paccardi*; *Scleritoderma flabelliformis*; *Setidium obtectum*; sponges.

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1. The SCLERITODERMIDAE currently consist of a group of polymorphic, massive, encrusting, ear, foliated, cup-to-vase shaped or flabellate sponges with choanosomal desmas as thorny or tuberculated rhizoclones; ectosomal spicules when present are various acanthorhabds/acanthostrongyles, styles or smooth strongyloxeas; microscleres when present are spinose sigmaspires.

2. Schmidt (1879, p. 28, pl. 2, fig. 3) established the rhizomorine lithistid genus *Scleritoderma* and species *S. paccardi* by means of a joint description. The species was based on a single specimen (catalogue no. MZUS PO175 in the Musée de Zoologie, Université de Strasbourg), probably from the Mexican Gulf but no exact location or depth was given. As the single included species in the genus, *S. paccardi* is the type species by monotypy. The description and illustrations were very general.

3. Subsequently, Sollas (1888, p. 316, pl. 35, figs. 26–50) described and illustrated a second rhizomorine lithistid species, *Scleritoderma flabelliformis*, from Ki Island in Indonesia. The species was based on five specimens (collection number BM(NH) 1891.5.4.10 in The Natural History Museum, London) and is characterized by

the presence of ectosomal acanthorhabds, choanosomal rhizoclone desmas and sigmaspire microscleres. Following Sollas's (1888) description, the presence of ectosomal acanthorhabds has been regarded as the characteristic feature of the genus *Scleritoderma*. Sollas (1888, pp. 316–317) recorded that the resemblance of *S. flabelliformis* to *S. paccardi* was 'very close' but (pp. 346–347) that it could be very clearly distinguished.

4. We have examined the original specimen of *Scleritoderma paccardi* and found that it has ectosomal smooth rhabds or amphistrongyles, instead of acanthorhabds. We also found that it is morphologically very similar to the holotype (MCZ 6462 in the Museum of Comparative Zoology, Harvard University, collected off Havana) of another taxon, *Setidium obtectum* Schmidt, 1879 (p. 30, pl. 1, fig. 9, pl. 2, fig. 14), described and illustrated in the same work. *Setidium obtectum* also displays choanosomal rhizoclone desmas and sigmaspire microscleres, as shown by the recent revision by Pisera (1999), but smooth strongyloxeas as ectosomal spicules, instead of acanthorhabds. We believe that *Scleritoderma paccardi* and *Setidium obtectum* are conspecific and, as a consequence, the specific names are synonyms. The nominal species *paccardi* was established in the genus *Scleritoderma* and, in the interests of nomenclatural stability, as First Revisers (Article 24 of the Code) we select *obtectum* to take precedence over *paccardi* for the name of the type species of *Setidium*.

5. Since Sollas's (1888) publication, the name *Scleritoderma* has consistently been used for a genus of five species characterised by acanthorhabds and with a world wide distribution in the tropics at 15° north and south. The name *Setidium* has been used for a monotypic genus lacking acanthorhabds, originally dredged off Havana (see Sollas, 1888; Lendenfeld, 1903; and Van Soest & Stentoft, 1988) and now known from several localities in the Caribbean (see Pisera, 1999). Recognition of *Scleritoderma paccardi*, which lacks acanthorhabds, as the type species of *Scleritoderma* would cause considerable confusion. Moreover, the names *Scleritoderma* and *Setidium* would become subjective synonyms, leaving the remaining species currently included in *Scleritoderma* in need of a new generic name. Sollas's (1888) species *Scleritoderma flabelliformis* clearly shows the acanthorhabds characteristic of *Scleritoderma* and has been treated as a reference in the placement of other species in the genus (see, for example, Thiele, 1900; Lévi & Lévi, 1983, 1989; Van Soest & Stentoft, 1988; and Gruber, 1993). *Scleritoderma flabelliformis* was well described and illustrated, and original material is preserved and available for study (para. 3 above). We therefore propose that *S. flabelliformis* be designated as the type species of *Scleritoderma*, thereby maintaining the current universal usage and understanding of both the names *Scleritoderma* and *Setidium*.

6. In a forthcoming revision of the Recent genera of lithistid sponges for the international project 'Systema Porifera', to be published in late 2002, we have proposed that *Scleritoderma paccardi* should be set aside as the type species of *Scleritoderma* and that *S. flabelliformis* be designated as the type, while maintaining *Setidium* as a distinct genus with *S. obtectum* as its type.

7. The International Commission on Zoological Nomenclature is accordingly asked:

(1) to use its plenary power to set aside all previous fixations of type species for the nominal genus *Scleritoderma* Schmidt, 1879 and to designate *Scleritoderma flabelliformis* Sollas, 1888 as the type species;

(2) to place on the Official List of Generic Names in Zoology the following names:
   (a) *Scleritoderma* Schmidt, 1879 (gender: neuter), type species by designation in (1) above *Scleritoderma flabelliformis* Sollas, 1888;
   (b) *Setidium* Schmidt, 1879 (gender: neuter), type species by monotypy *Setidium obtectum* Schmidt, 1879;

(3) to place on the Official List of Specific Names in Zoology the following names:
   (a) *flabelliformis* Sollas, 1888, as published in the binomen *Scleritoderma flabelliformis* (specific name of the type species of *Scleritoderma* Schmidt, 1879);
   (b) *obtectum* Schmidt, 1879, as published in the binomen *Setidium obtectum* (specific name of the type species of *Setidium* Schmidt, 1879).

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